

THE AYL TO RĀS AN-NAQAB ARCHAEOLOGICAL SURVEY, SOUTHERN JORDAN – PHASE 2 (2006): PRELIMINARY REPORT

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Introduction

The first season of “The Ayl to Rās an-Naqab Archaeological Survey, Southern Jordan” (ARNAS) took place in 2005 (MacDonald *et al.* 2005) while the second infield season was held between May 10 and June 20, 2006. Team members for the second season were: B. MacDonald, director; L. G. Herr, ceramics; S. Quaintance, photography and GPS; M. Tremblay, GIS, GPS, and mapping; J. Corbett, GIS; and Ammer Bdour, representative of the Department of Antiquities. The team was housed in the town of aṭ-Ṭayyiba, located to the northwest of the survey territory and to the south of Wādī Mūsā.

The report on the first season of work sets forth the objectives, geographical, environmental and archaeological contexts, and methodology of the project (MacDonald *et al.* 2005). Thus, it is necessary only to summarize these matters here.

The main objective of the work is to discover, record, and interpret archaeological sites within the Ayl to Rās an-Naqab region, an area comprising approximately 860 square kilometres. Other objectives include a study of the settlement patterns of the area from the Lower Paleolithic (ca. 1.4mya) to the end of the Late Islamic period (1918 AD); to examine the Pleistocene lakes in the area; and to investigate further the *Khayṭ Shabīb* or “*Shabīb’s Wall*” (MacDonald *et al.* 2005).

The territory of the survey is part of the southern segment of the Transjordanian Plateau. It is ca. 26 (N-S) x 39 (E-W) — at its widest — kilometres.¹ The western extremity of the territory

is the 1100m elevation line while the eastern extremity extends to the 1200m elevation line towards the city of Ma‘ān (Fig. 1).

The ARNAS survey territory consists of three topographical zones (Fig. 1). These zones are of particular importance for the 2006 infield work:

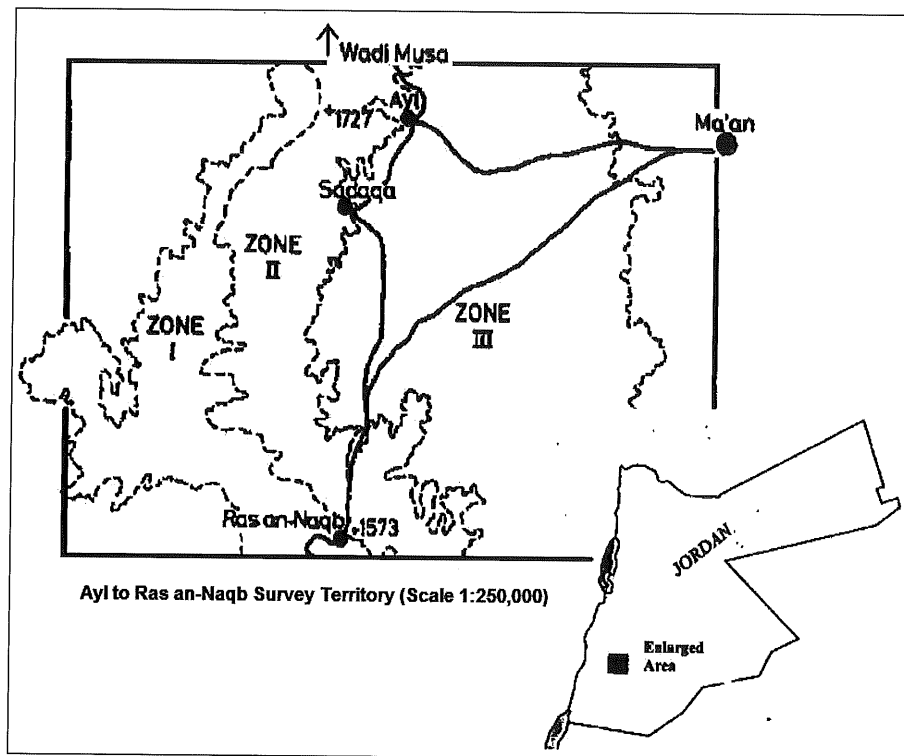
Zone I is the western segment of the territory. It lies in an area where elevations range from 1100m on the west to 1500m on the east. It is the western extremity of the Highlands east of the Rift Valley, i.e., the Wādī ‘Araba-Dead Sea-Jordan Depression (Bender 1974, 1975). West and southwesterly flowing wadis cut deeply into the terrain. The vegetation in this zone is Mediterranean and the present-day climate is arid, with annual precipitation as low as 50 millimetres.

Zone II is the central segment of the territory, i.e., the mountainous region where elevations range from just over 1700m in the north to 1500m in the south around Rās an-Naqab. This geographical zone is frequently referred to as the Mountain Ridge and Northern Highlands east of the Rift Valley (Bender 1975). Both its western and eastern boundaries are defined by the 1500m line. The main N-S highway and the watershed are located in this zone. Wadis flow from it to both the west and southwest on the one hand and to the east and southeast on the other, i.e., into Zone I and III respectively. Here, a Mediterranean climate dominates and annual precipitation is around 300 millimetres.

Zone III is the area from the 1500m line on the west to the 1200m line, i.e., towards the city of Ma‘ān, on the east. It is the area between the “sown” and the “desert” (‘Amr and al-Moumani

1. The survey territory, as a glance at Figures 1 and 2 indicates, is not rectilinear. Rather, it follows the 1100 and 1200m contour lines on the west and east respectively.

The east-west dimension given here is a correction of what appears in MacDonald *et al.* 2005: 277.



1. Ayl to Rās an-Naqab Survey Territory (Scale 1:250,000).

2001: 275) and is at the western extremity of the Central Jordan Pediplain or Central Desert Area of Jordan (Bender 1974). The climate in this zone, as in Zone I, is arid and the vegetation is Irano-Turanian (MacDonald 2000: 36-38, esp. fig. 6).

As set forth in MacDonald *et al.* (2005: 278-279) previous surveys have been carried out in the Ayl to Rās an-Naqab area. None of them, however, has been both comprehensive and systematic. In addition, Hart excavated one site, namely, Ghurayra (1988, 1989), and carried out five soundings at other sites in the survey territory (1987a-b). Moreover, the Department of Antiquities has excavated four sites within the area (Waheeb 1996; see also Bisheh *et al.* 1993).

Phase 1

During the 2005 season of the project, ARNAS team members carried out a comprehensive and systematic examination of the greater part of Zone II, the area in which the majority of present-day villages and farms are located. In addition, team members examined in Zone III Pleistocene lakes noted, for the most part, on the “Geological Map of Ma’an (3150-III)” (Tarawneh 2004) and the “Geological Map of

Jabal a-Batra (Jibal Thlaja) (3149-IV)” (Moumani 2002). As a result of the 2005-season’s work, team members surveyed 209 sites, including eight Pleistocene lakes (MacDonald *et al.* 2005: 280-283, Table 1). Cultural-temporal units represented at these sites span the Lower Paleolithic to the Late Islamic period (MacDonald *et al.* 2005: 288, fig. 7). However, some cultural-temporal units are poorly represented or not represented at all among the collected lithics and sherds. Finally, the sites surveyed served a wide range of different functions (MacDonald *et al.* 2005: 284, Table 2).

Phase 2

During Phase 2 of the ARNAS project, ARNAS team members concentrated their efforts on transecting and recording the archaeological remains found in the randomly-chosen squares (see below) of the three topographical zones of the survey territory. As well, we surveyed the sites encountered within, adjacent to, or on our way to them.

The investigation of these random squares (500 x 500m), which cover about 5 percent of each of the three topographical zones, has a threefold purpose.

First, the units “provide a baseline against

which pottery collected from archaeological sites in the region can be compared”.

Second, these units “force the researcher into all areas of the project region”.

Third, “recording random squares has proven to be an effective means of discovering new sites, both within and adjacent to the squares.... In essence, the recording of random squares provides access to a statistically valid sample of archaeological sites and ceramics” (Herr and Christopherson 1998: 52).

The stratified random sample units for the ARNAS project are based on the Map Series K737, Sheets 3049 I (El Quweira), 3050 II (Ras en Naqb), 3149 IV (Jibal el Batra), and 3150 III (Ma'an) (Scale 1:50,000); created in Arc/INFO GIS software; projection and coordinate system UTM Zone 36N; European Datum 1950; database development by G. L. Christopherson and P. O. Leckman; and cartographic development also by Christopherson (**Fig. 2**).²

The 2006 season's work resulted in the transecting and recording of the archaeological remains in 82 of the random sample units: 27 in Zone I; 25 in Zone II, and 30 in Zone III (**Table 1** — List of Random Squares). While carrying out this work we also recorded an additional 115 sites (210-324) (**Table 2** — List of Sites). For each of the random squares transected and the archaeological sites “discovered”, we filled out a sheet in the field that provides its initial description. All collected materials, either from the squares or the sites, were labeled as to their provenance before they were put into the vehicle. Moreover, photographs were taken of what team members considered to be the square's and/or the site's most important features. At base camp, square and site sheets were updated on a daily basis, entries were made to the project's database, the location of each square and site were plotted with the aid of co-ordinates obtained in the field with the aid of a Global Positioning System (GPS), on maps using an ArcGIS database, and preliminary cultural-temporal units were assigned to the materials collected. Following the infield season, further research is being done on

the cultural remains of the survey territory; selected sherds and lithics, with the permission of the Department of Antiquities, were shipped to Canada for further analyses, e.g., sawing, drawing, colour coding, and the preparation of plates for publication purposes; and work on preliminary reports and a final report are underway. Again, this season, we are providing a list of the archaeological sites that we consider to be the best candidates for excavation (**Table 3** — List of Candidates for Excavation).

The transecting of the randomly-chosen units and the collecting of lithics and sherds within them was carried out by four team members. We spaced ourselves ca. 70m apart and did one transect in either a N-S or an E-W direction. Then we shifted over and completed the transect of the particular square going in the opposite direction. GPS units held by the team members on the extremities of each transect generally kept team members in line or, at least, within the unit in question. The corners of each random unit were, of course, located, using GPS technology, on the basis of coordinates that Christopherson and Leckman had provided us previous to the beginning of the infield work.

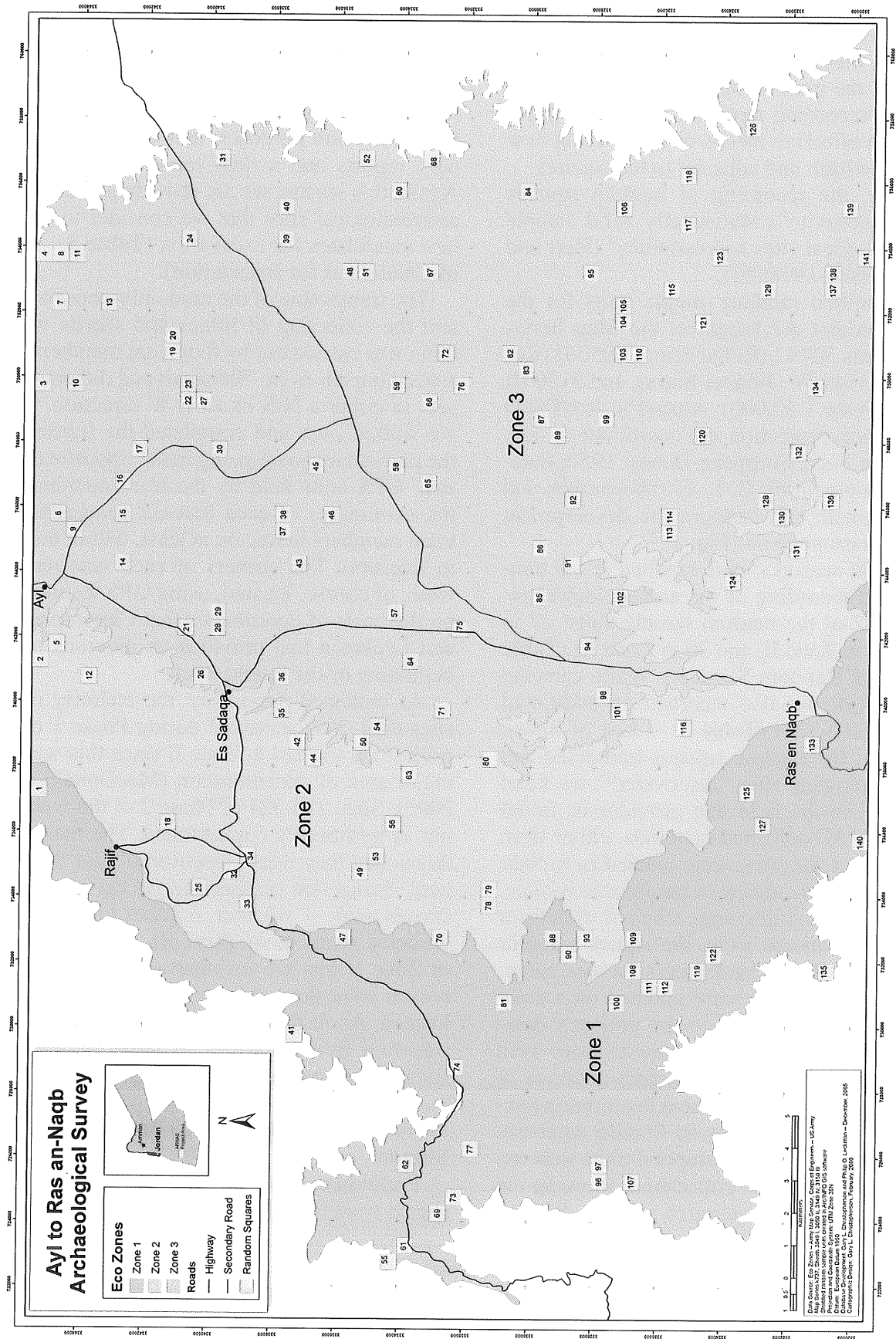
As indicated previously, the majority of the sites (001-209) surveyed during Phase 1 of the project are located in Zone II since this was our major area of concentration (MacDonald *et al.* 2005). Sites 210-324 of Phase 2 of the work are not as territorially concentrated. The reason for this is that they were “discovered”, for the most part, during the transecting of the randomly-chosen units — whether in Zones I and II or the westerly segment of Zone III. The only areas of Zone II that we revisited during the second season were those where random squares were located. As in the 2005 season, we were again surprised by the number of large architectural sites that we encountered and documented.

Preliminary Analyses of Collected Lithic and Sherds

Preliminary analyses of collected lithics and sherds from both the stratified units and the sites

2. The most westerly-indicated road alignment, i.e., the one that cuts through the western segment of topographical Zone I, in Figure 2, follows the Old Turkish Road (*Darb ar-Rašif*), especially from Kh. Dulāgha

(Site 208) southward. From Kh. Bir Ḥamad (Site 248), at the modern, water- pumping station, it goes in a more westerly direction, than the modern asphalt road, to Wādī 'Araba.



2. Topographical Zones and Random Squares of the ARNAS project (Scale 1:250,000).

Table 1: List of Random Squares Transected during Phase 2 (2006) of the Project.

Zone I: 1; 41*; 47; 55*; 61*; 62; 69; 74; 77; 81; 88; 90; 96; 97; 100; 107*; 108*; 109; 111; 112; 119; 122; 125; 127; 133; 135; and 140 (n=27).
Zone II: 2; 5; 12; 18; 25; 32; 33; 34; 35; 42; 44; 49; 53; 56; 63; 70; 78; 79; 80; 93; 116; 124; 130; 131; and 136 (n=25).
Zone III: 9; 14; 15; 16; 21; 26; 28; 29; 36; 37; 38; 43; 46; 50; 54; 57; 64; 71; 75; 85; 86; 91; 92; 94; 98; 101; 102; 113; 114; and 128 (n=30).
* Because of the ruggedness of the terrain, ARNAS team members were unable to transect completely five squares in topographical Zone I. This is due to the fact that the transecting of a segment of these units, because of deeply-cut wadis within them, was considered too dangerous. In addition, we were unable to transect any of Random Square 73, also in Zone I, for the same reason.

Table 2: List of ARNAS Phase 2 (2006) Sites.

Site #	UTM	Coordi-	Site Name	Function**
	nates*	nates*		
210	741128/3345258	-		Seasonal farmstead (?)
211	741007/3344928	-		Road
212	732568/3332480	-		Knapping site
213	736482/3341240	-		Farmstead – seasonal (?)
214	736405/3341630	-		Agricultural village
215	734911/3338678	-		Farmstead
216	734040/3339014	-		Agricultural station – seasonal; quarry (?)
217	733507/3338867	-		Farmstead – seasonal
218	732677/3332761	-		Agricultural installation
219	732872/3335863	-		Farmstead (?)
220	733056/3335825	-		Defensive installation (?)
221	733837/3331519	-		Farmstead
222	730789/3330418	Kh. Quray'a		Agricultural village
223	730427/3331119	Kh. al-Juhayr		Agricultural village
224	731416/3332107	-		Agricultural administrative centre (?)
225	732201/3331621	-		Agricultural village
226	732234/3330965	-		Monitoring/defensive (?)
227	733045/3330986	-		Agricultural village or hamlet
228	733163/3330720	-		Agricultural village or hamlet
229	732889/3328483	-		Agricultural village or hamlet (Fig. 3)

230	732225/3328761	-		Watchtower or small fort (?)
231	732694/3328692	-		Seasonal camping (?)
232	733179/3328132	-		Lithic scatter
233	733643/3328937	Kh. Khalil	Administrative centre (?)	
234	733319/3328769	Rujum Khalil	Agricultural village or hamlet	
235	733823/3335948	Rujum Abū Rumān Watchtower (?)		
236	726967/3332621	-		Agricultural hamlet or farmstead
237	726385/3333315	-		Farmstead (?)
238	726897/3333676	Kh. ash-Shallāl	Agricultural hamlet or farmstead	
239	727410/334819	Umm Ḥaṣā		Fort
240	727819/3331113	-		Cemetery
241	727931/3331184	Bīr Ḥamad Village	Agricultural village	
242	733502/3336455	Qaṣr al-Kufūr	Villa (?)	
243	723107/3333302	-		Lithic scatter
244	724676/3334037	-		Circular structure; seasonal campsite
245	725433/3333248	Turkish Road	Curb stones along roadway	
246	725230/3333143	-		Farmstead (?)
247	726161/3333420	-		Seasonal campsite (?)
248	727876/3332081	Kh. Bīr Ḥamad	Agricultural village and/or	
249	727651/3330906	-		Winnowing area
250	727600/3331078	-		Agricultural, seasonal (?)
251	727308/3330494	-		Agricultural village and watchtower
252	727796/3331016	-		Seasonal campsite (?)
253	728985/3331155	Kh. Abū Rā'id Agricultural village		
254	728400/3330824	-		Agricultural village
255	727770/3328769	-		Waystation along Wādī Bir Ḥamad
256	732921/3329915	-		Farmstead – seasonal

257	731237/3328487	-		Agricultural village
258	730651/3328356	Kh. Umm Naşra	Agricultural village	
259	734411/3327349	-		Watchtower (?) and tomb (?)
260	734831/3327157	-		Fort (?)
261	735065/3327944	-		Farmstead
262	731639/3327443	-		Seasonal campsite
263	730669/3327089	-		Seasonal campsite
264	725525/3326925	-		Seasonal campsite
265	727550/3329840	-		Farmstead
266	728034/3325768	Rujum ath-Thughra	Agricultural village	
267	728326/3326840	Kh. ath-Thughra	Agricultural village	
268	731462/3324913	-		Seasonal campsite
269	731722/3321012	-		Aqueduct
270	736729/3322305	-		Seasonal campsite
271	736398/3322519	-		Seasonal campsite
272	736015/3322845	-		Seasonal campsite
273	736652/3322814	-		Function unknown
274	735379/3327217	-		Farm or waystation on road (?)
275	735246/3325894	-		Watchtower
276	735056/3326472	-		Farmstead
277	735273/3325669	Kh. ‘Aṭiyya	Farmstead (Fig. 4)	
278	735622/3325428	Kh. ‘Ayn al-Qanā	Farmstead	
279	738774/3321524	-		Seasonal campsite
280	746694/3320580	-		Farmstead
281	745222/3321745	-		Water catchment facility
282	745304/3322014	-		Water catchment facility
283	745664/3322278	-		Seasonal campsites
284	743978/3320620	-		Watchtower (?)
285	743452/3321290	-		Agricultural village
286	744574/3322238	-		Water catchment facilities
287	744614/3321563	-		Water catchment facility
288	744193/3323590	-		Water catchment and win- nowing area
289	744222/3323908	-		Seasonal campsite
290	738714/3325242	Kh. al-Ḥayyād	Agricultural village	
291	739404/3324564	-		Farmstead
292	739615/3324424	-		Seasonal campsite

293	740838/3321313	-		Watchtower
294	736962/3325715	Dār ar-Rāṭūzī	Farmstead (?)	
295	737542/3326191	Kh. ar-Raṣīf	Fort and watchtower	
296	737303/3326566	-		Major roadway
297	734490/3328004	Kh. ‘Alāwa	Agricultural village	
298	734291/3327766	-		Farmstead
299	734833/3329232	Kh. Umm Za‘rūra	Farmstead	
300	737050/3325352	-		Seasonal campsite
301	736387/3324897	-		Winnowing/water catchment facility
302	736232/3326786	-		Agricultural village
303	734482/3328688	Abu ‘Ali Inscription		
304	734920/3330282	-		Watchtower/way station on roadway
305	733293/3330927	-		Agricultural village (Fig. 5)
306	734118/3338410	-		Wathctower (?)
307	733784/3338268	Ghurayra	Agricultural village	
308	741050/3340272	-		Rectilinear structure; un- known function
309	742525/3333504	-		Farmstead (?)
310	740827/3333103	-		Farmstead
311	744682/3331052	Kh. Umm Qaṣīr Waystation along <i>Khaff</i> <i>Shabīb</i> (Fig. 6)		
312	743964/3329134	-		Waystation along <i>Khaff</i> <i>Shabīb</i>
313	741713/3328343	-		Agricultural village
314	742988/3327163	-		Circular enclosure – seasonal
315	742580/3327189	-		Farmstead
316	742009/3326854	Kh. al-Ghuzlān	Agricultural village	
317	744100/3326247	Kh. al-Da‘ūq	Agricultural town	
318	740250/3327785	-		Fort (?)
319	741015/3328127	-		Seasonal agricultural farm (?)
320	733471/3337520	-		Watchtower
321	733789/3337223	-		Farmstead
322	733775/3337450	-		Farmstead (Fig. 7)
323	745380/3335808	-		Robbed tombs (?) and lithic scatter

324 745114/3338554 -

Watchtower (?) adjacent to
Khayt Shabib

* UTM Coordinates are European Datum 1950. It ought to be noted that the coordinates given in MacDonald *et al.* (2005: 280-283) for Sites 001-209 of Phase 1 (2005) of the project are World Geodetic System 1984 (WGS 84). The change from WGS 84 to European Datum 1950 was made because the coordinates that G. L. Christopherson provided for the stratified random sample units are European Datum 1950 (see Fig. 2). They are the coordinates used on Map Series K737, Sheets 3049 I (El Quweira), 3050 II (Ras en Naqb), 3149 IV (Jebal el Batra), and 3150 III (Ma'an) (Scale 1:50,000).

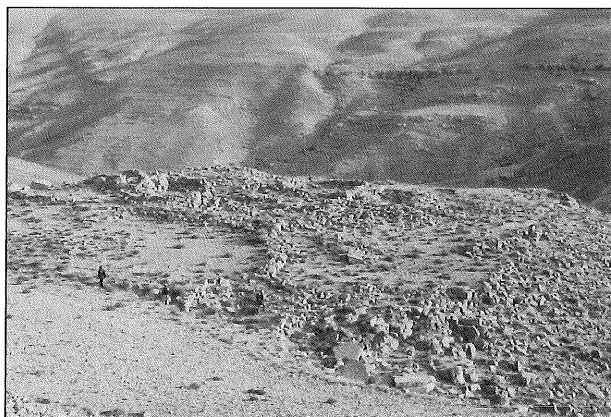
** Of course, the determination of "function" on the part of ARNAS team members must be tentative at this stage of investigation. Generally, it is only with the excavation of the site in question will it be possible to determine with greater certainty its function(s).

Table 3: ARNAS Phase 2 (2005) Sites that are good Candidates for Excavation.

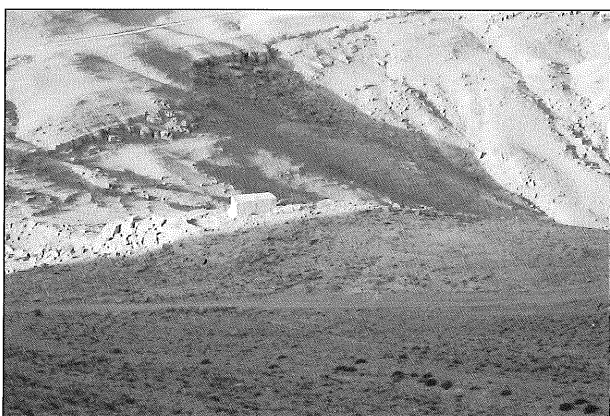
Site #	Name (if known); Reason(s) for Excavation
222	agricultural village spread over a large area; excavations could reveal its plan;
225	large agricultural village with a great deal of potential for excavation;
238	Kh. ash-Shallāl; a "modern" agricultural village that has ancient remains and is lived in during the winter months;
239	Umm Ḥaṣā; probably a fort in a very isolated setting; could have intact architecture under the rubble;
240	cemetery that could have some intact ancient remains;
241	Bir Ḥamad; an agricultural village with a great deal of potential for excavation since parts of it are still lived in during the winter months but it has a past that could go back centuries;
242	Qaṣr al-Kufūr; probably a villa that could reveal a great deal about such structures and their date;
251	an extremely impressive site because of the monumental character of its remaining walls, its caves, and its winnowing areas - with flagstones <i>in situ</i> ;
254	due to the danger of further damage from wadi flooding this site ought to be excavated as soon as possible; however, there would be the necessity to remove a great deal of rubble before getting down to <i>in situ</i> material;
257	a good deal of silting that probably preserved ancient remains; could tell a great deal about life in an agricultural village at a particular period or periods;
258	Kh. Umm Naṣra; remnants of remains of buildings from at least two archaeological periods; could provide information on an agricultural village's development/evolution;
267	Kh. ath-Thughra; remnants of an agricultural village that shows a great deal of deposition;
275	this is a watchtower that has been illicitly excavated; nevertheless, it still warrants further investigation;
276	a farmstead that could reveal, on the basis of the foundation walls, a great deal about habitation in an isolated area;
285	good deposition at this agricultural village or hamlet site; moreover, there appears to be two modes of construction and excavation would hopefully reveal the reason(s)/periods;
290	Kh. al-Ḥayyād; a major agricultural village with different periods represented; appears to be a good deal of deposition;
295	Kh. ar-Raṣif; a small fort and associated watchtower near a major roadway; one may be able to get a great deal of information because of what appears to be the remnants of most of the main structure;
297	Kh. 'Alāwa; a large and impressive agricultural village that appears to have a lot of <i>in situ</i>

material; could reveal a great deal about village life during the period(s) during which it was occupied;

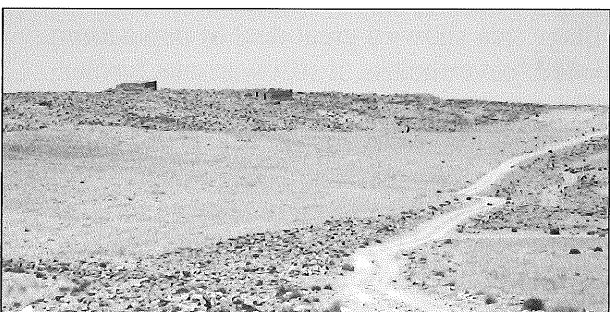
304 the main outline of this structure appears clear and excavation could determine its purpose;
 317 Kh. al-Da'ūq; an extremely impressive and large site that could reveal a great deal about
 agri cultural town/village life on the southern Transjordanian Plateau;
 318 there is some good wall preservation at what may be an Iron Age II fort (?) and there may
 be good deposition in the interior; this area is relatively clear of rubble.
 324 this is what appears to be a watchtower, and possibly much more, immediately west of the
Khaṭṭ Shabīb, Site 050; there is a great deal of well-preserved architecture at it.



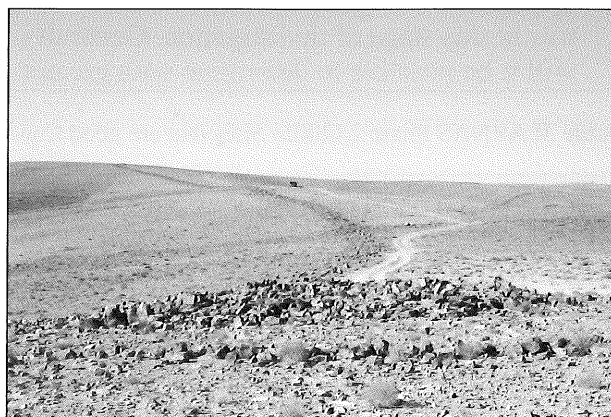
3. Site 229: Farming village.



4. Site 277: Kh. 'Aṭīyya.



5. Site 305: Agricultural village.



6. Site 311: Kh. Umm Qaṣīr, Waystation; with *Khaṭṭ Shabīb*.



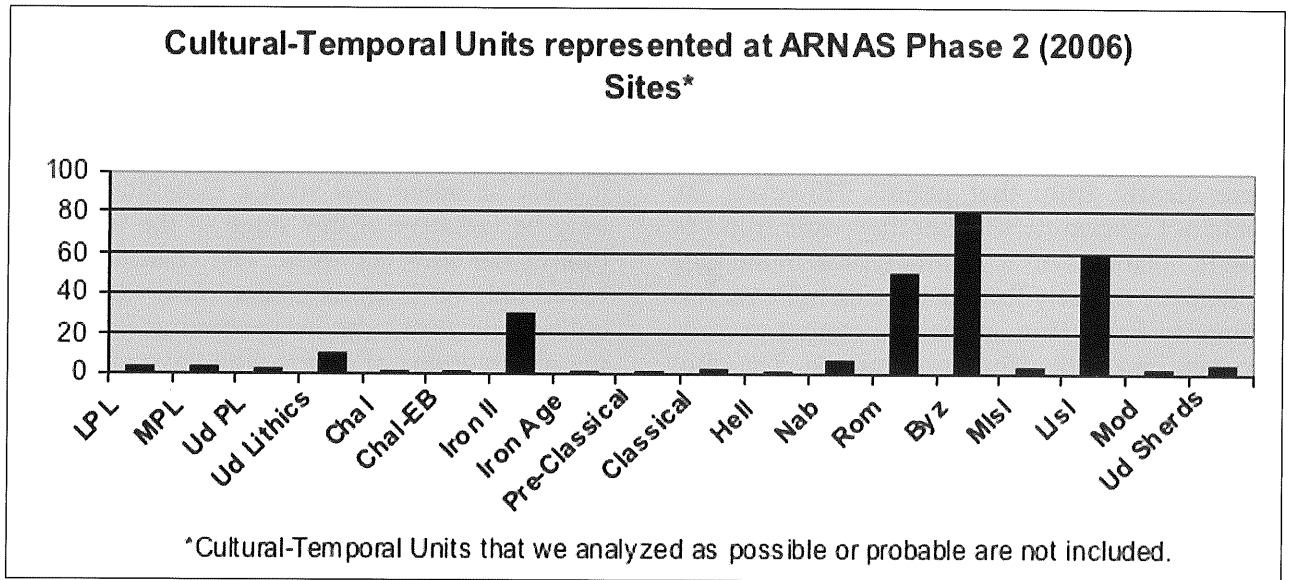
7. Site 322: Farm.

indicate the cultural units present in each (**Fig. 8 and Fig. 9** respectively).³

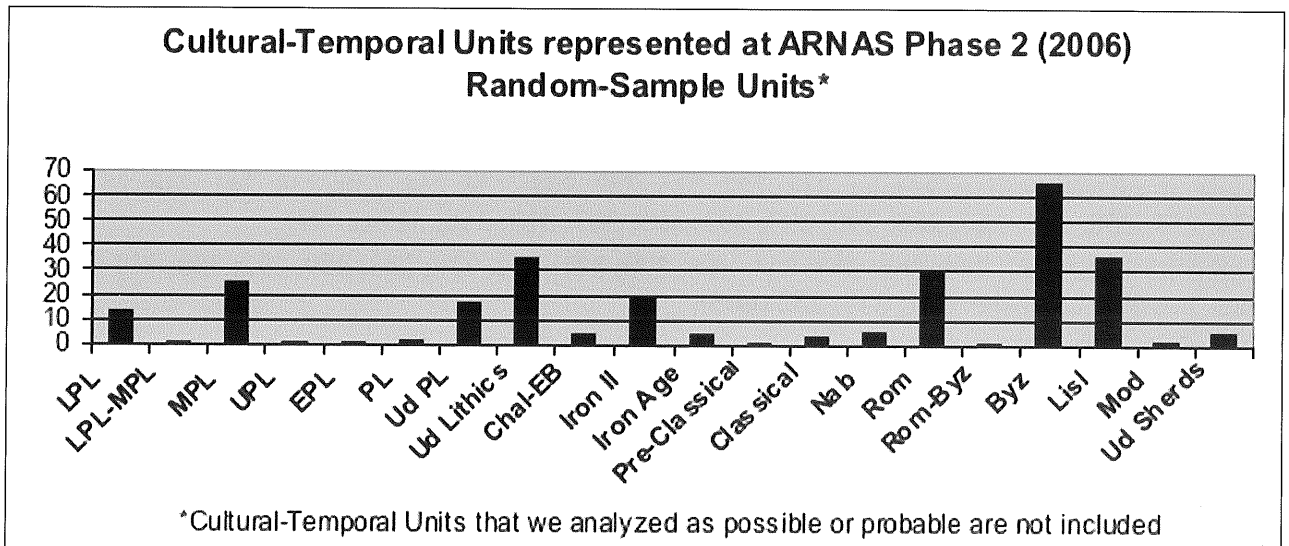
Relative to Figure 8, cultural-temporal units at the randomly-sampled squares, the Lower and the Middle Paleolithic are the best represented from the pre-ceramic periods. The Upper and Epipaleolithic are poorly represented while the Neolithic is not represented at all among the collected materials. As far as the ceramic periods are concerned, the Iron II, Roman, Byzantine,

3. Since G. A. Clark could not join us in the field this season, M. P. Neeley, Montana State University, Bozeman, did the preliminary analysis of the lithics on June,

13. Lithic materials collected after that date are not included in Figures 8 and 9.



8. Cultural-Temporal Units represented at ARNAS Phase 2 (2006) Stratified, Random-Sample Units.



9. Cultural-Temporal Units represented at ARNAS Phase 2 (2006) Sites.

and Late Islamic periods are best represented. However, the Bronze periods are either poorly represented or not represented at all. This is also the case for the Persian, Hellenistic, and Early and Late Islamic periods.

Relative to Figure 9, cultural-temporal units at Phase 2 sites, here again both the Lower and Middle Paleolithic are best represented. There is no identified material from the Upper Paleolithic, Epipaleolithic, and Neolithic periods. As for the ceramic periods, no sherds from the Middle Bronze, Late Bronze, Persian (however, see below), or Early Islamic time-frames were identified in the preliminary analyses. However, the Iron II, Roman, Byzantine, and Late Islamic

periods are well represented, while the Hellenistic and Middle Islamic periods are poorly represented.

What Figures 8 and 9 clearly point out is the close correspondence between the cultural-temporal units represented among the collected lithics and sherds from both the random squares and the sites. It must be kept in mind that where a site is within or adjacent to a particular random square it would be normal to have many of the same cultural-temporal units represented in the collections from both.

The high density of lithics collected in RSs 61 and 69 in Zone I and in RSs 64 and 71 in Zone III is noteworthy. Although the areas where

these squares are located are mostly barren presently, such would not have been the case in all of the Paleolithic periods.

Some of the pottery readings need to be explained. "Iron Age" readings were sherds that were clearly from that period. However, we could not determine whether they were Iron I or Iron II. "Nabataean" is pottery typical of the Late Hellenistic to Early Roman horizon at Petra. It is primarily Early Roman, but we cannot exclude the very end of the Hellenistic period. The "Roman" readings were probably Late Roman, but may include some Early Roman sherds as well. They could also include sherds that span most of the Roman period (MacDonald *et al.* 2005: 288). Finally, it must be noted that sherds that we are calling Iron II could very well continue into the Persian period.

Site Types of Phase 2 (2006) Season

ARNAS team members assigned functions to most of the sites surveyed during the second season of infield work (**Table 4** — Types of Sites). Here, again, as for the list of sites in **Table 1**, it must be noted that such a classification can only be tentative at this stage of the investigation of the sites surveyed. The classification is based only on team members' observations and collections at the site in question as well as on the observations of others who have visited the site. A more definite determination of a particular site's function(s) can usually be determined by excavation. And, of course, a site may have served a particular function or functions in one archaeological period and a different one or ones in others.

What **Table 4** clearly points out is the number

Table 4: Site Types of ARNAS Phase 2 (2006) Season.

Aqueduct: 269.
Agricultural administrative centre (?): 224; 233.
Agricultural town/village/hamlet: 214; 222; 225; 227; 228; 229; 234; 236; 238; 241; 248; 251; 253; 254; 257; 258; 266; 267; 285; 290; 297; 302; 305; 307; 313; 316; 317 (n=27).
Campsite – seasonal: 244; 262; 263; 264; 268; 270; 271; 272; 279; 283; 289; 292; 300; 314 (n=14); plus, possible campsite: 231; 247; 252 (n=3).
Cemetery: 240; 323 (?).
Defensive installation, e.g., fort, watchtower: 239; 293; 295; 320; (n=4); plus possible defensive installation: 220; 226; 230; 235; 259; 260; 275; 284; 306; 318; 324 (n=11).
Farm: 215; 217; 218; 221; 223; 256; 261; 265; 276; 277; 278; 280; 291; 298; 299; 310; 315; 321; 322 (n=19); plus, possible farm: 210; 213; 216; 219; 237; 246; 250; 274; 294; 309; 319 (n=11).
Inscription: 303.
Lithic scatter: 212; 232; 243 (n=3).
Road: 211; 245; 296 (n=3).
Villa (?): 242.
Water catchment facility: 281; 282; 286; 287; 288; 301 (n=6).*
Waystation: 255; 304; 311; 312 (n=4).
Winnowing area: 249; 301.**
* Not all the water catchment facilities that survey team members noted are labeled sites. Some of them are noted as features within or in association with random squares, e.g., the descriptions of RS 77, RS 91, and RS 131 in Zones I, II, and III respectively note their presence.
** Of course, ARNAS team members noted many more winnowing areas in the survey territory. However, their presence is generally noted in both the random square and site descriptions rather than assigning separate site numbers to each one of them. Moreover, water catchment facilities could have been used seasonally for winnowing purposes.

of agricultural towns/villages/hamlets among the 115 sites surveyed during Phase 2. Some of these sites are large and impressive, e.g., Site 317 (Khirbat al-Da'ūq). In many cases, the architectural preservation is good. And the majority of them have not been reported in the scholarly literature.

Besides the above-described type of site, there are a large number of farms. These farms consist of the remnants of one-three structures. Many of them are still in use, especially as places to store farm equipment and/or to pen sheep and goats. Moreover, some of the inhabitants of the area told us that some of these farm buildings are used during the winter months while they are abandoned for tent-dwelling during the period from May to November.

The impression is that many of the areas in both Zones I and II surveyed during the 2006 season were once important as sources of agricultural products. This is in keeping with the findings during Phase 1 of the project.

Khaff Shabib

As noted previously, an investigation of the *Khaff Shabib* (ARNAS Site 050) (Kirkbride 1948; Kennedy 1982: 163-66; Abujaber 1995; Kennedy and Bewley 2004: 138-39), a north-south "running" stone wall, is one of the objectives of the project (MacDonald *et al.* 2005: 277). ARNAS team members first encountered it during the 2005 infield season in the area to the east of Kh. Ayl (Site 001) in the northern segment of topographical Zone III. During Phase 2 of the project, it was encountered throughout this zone. In places, e.g., in association with RSs 37, 43, 91 and 102, and Sites 311 (Kh. Umm Qaşir), 312, 317 (Kh. al-Da'ūq), and 324, it can be followed in clear and unbroken lines as it "snakes" over the undulating terrain. In fact, it can be followed throughout Zone III from northeast of RS 16 in the north to RS 102 in the south (**Fig. 2**). Parts of it have been removed, possibly for its available stone or because it impeded field clearance. In some places it is cut by modern farming roads and in many places a dirt road runs parallel to it. In no place did we see it more than ca. 0.50m in height and in these places its height is due to the fact that some of the stones that constitute it are standing on their ends. However, in some places, its rubble covers an area of ca. 2m in width.

In any case, it could hardly have served, at any time, as a defensive wall. It was most probably erected as a boundary line between the "desert" to the east and the "sown" to the west, i.e., between the nomadic and semi-nomadic people, on the one hand, and farmers and settlers, on the other. The latter would have erected it!

The *Khaff Shabib* is noted on the Series K737 Map, Sheet 3150 III (Ma'an) (Scale 1:50,000), as a "wall". In fact, there may be more than one such north-south "wall" line or, at least, branches of it.

Conclusions

Phase 2 of the project proved to be one in which ARNAS team members were continually surprised and delighted by the archaeological richness of the materials collected and recorded in both the 82 random squares transected and the 115 sites discovered. It is the hope of team members that the publication of these discoveries will open up for future researchers an area of Jordan that is barely tapped as far as its archaeological remains are concerned.

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